



Breast cancer: factors associated with stage at diagnosis in black and white women. Black/White Cancer Survival Study Group

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Abstract: BACKGROUND: Numerous studies have reported differences in cancer staging at diagnosis and in survival between Black and White patients with breast cancer. Utilizing data obtained from the National Cancer Institute's (NCI's) Black/White Cancer Survival Study for the period 1985-1986, a new study is presented here that systematically examines multiple explanatory factors (e.g., lack of mammograms) associated with these cancer-staging differences. PURPOSE: We evaluated within a single study the relationship of selected demographic, lifestyle, antecedent medical experiences, and health care access factors to cancer staging at diagnosis in Black and White breast cancer patients. METHODS: Data utilized in this population-based cohort study of 1222 eligible women (649 Black and 573 White) newly diagnosed for the period 1985-1986 with histologically confirmed primary breast cancer were obtained from the NCI's Black/White Cancer Survival Study. Sources of data included abstracts of hospital medical records, central review of histology slides by a study consultant pathologist, and patient interviews obtained from three metropolitan areas: Atlanta, New Orleans, and San Francisco-Oakland. Within each area, 70% of all Black incident cases were randomly selected, and a sample of White cases, frequency matched by age groups (20-49 years, 50-64 years, and 65-79 years), was selected for comparison. Stage of breast cancer at diagnosis was classified according to the international tumor-lymph node-metastases (TNM) system. Statistical models utilized in this study included the log-linear and polychotomous logistic regression with multiple predictor variables. RESULTS: Factors associated with cancer staging were differentially expressed in Blacks and Whites. Indicators of access to health care, a lack of mammograms, and an increased body mass index significantly ($P < .02$) contributed to stage differences in Blacks, whereas income was marginally associated ($P = .06$) with stage for Whites only. Nuclear grade, having a breast examination by a physician, and a history of patient delay explained approximately 50% of the excess risk for stage III-IV cancer versus stage I-II/NO cancer among Blacks compared with Whites (odds ratio reduction from 2.19 to 1.68). CONCLUSION: These findings suggest that no single factor or group of factors can explain more than half of the race-stage differences noted in this study with respect to Black and White breast cancer patients.